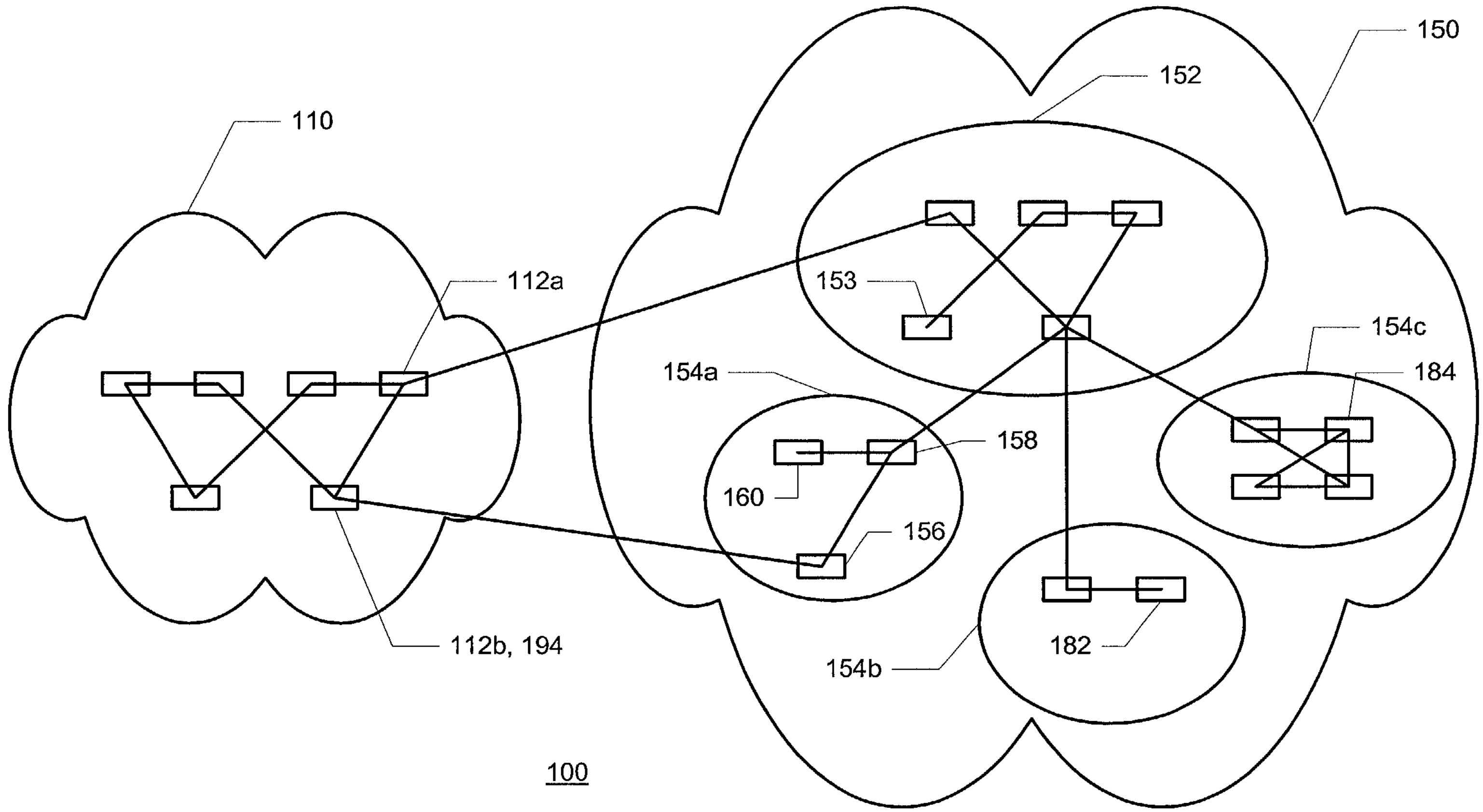
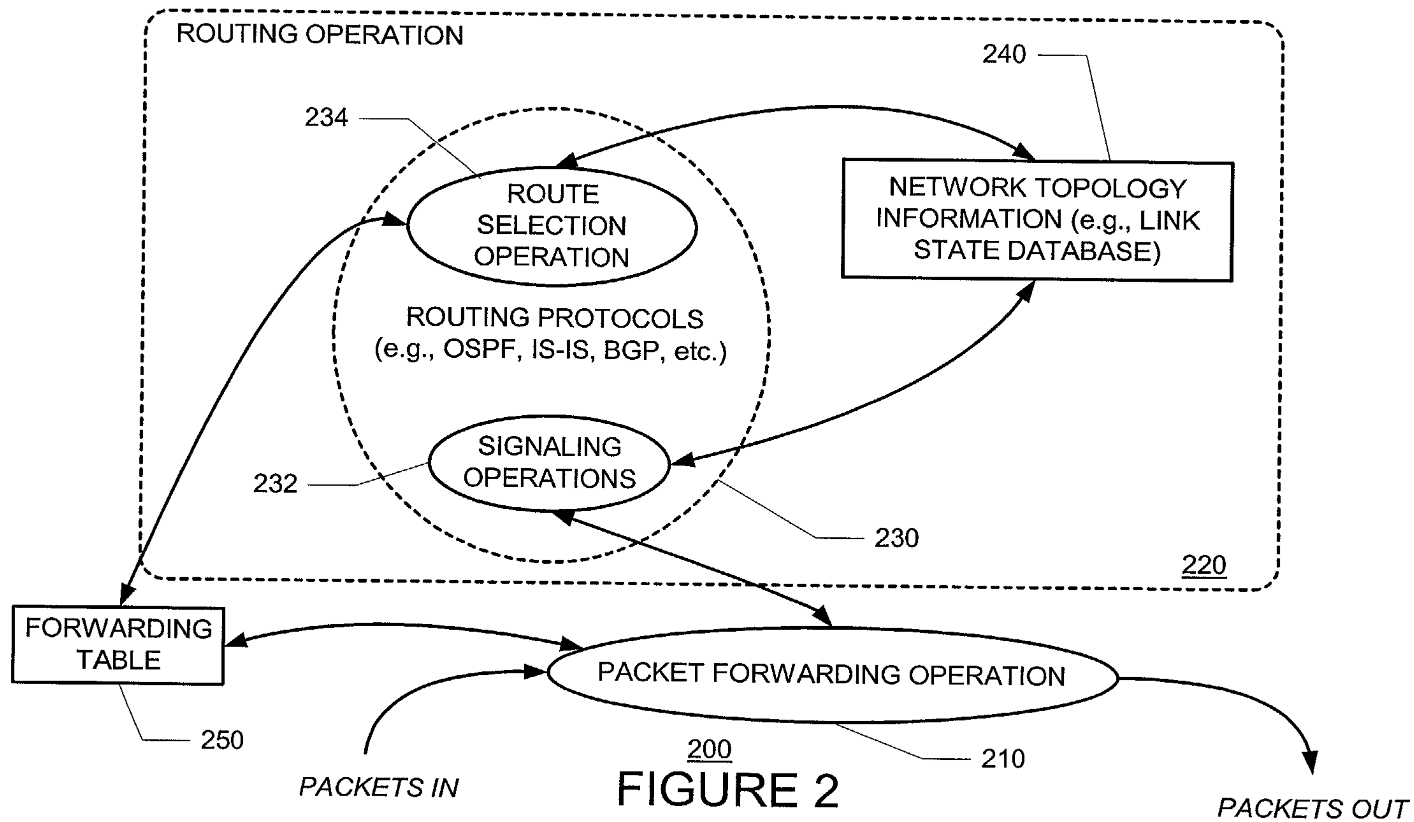

110
112a
112b, 194
150
152
153
154a
154b
154c
156
158
160
182
184

100

FIGURE 1


ROUTING OPERATION
240
234
ROUTE SELECTION OPERATION
NETWORK TOPOLOGY INFORMATION (e.g., LINK STATE DATABASE)
ROUTING PROTOCOLS (e.g., OSPF, IS-IS, BGP, etc.)
SIGNALING OPERATIONS
232
230
220
FORWARDING TABLE
PACKET FORWARDING OPERATION
250
210
PACKETS IN
PACKETS OUT

200
FIGURE 2

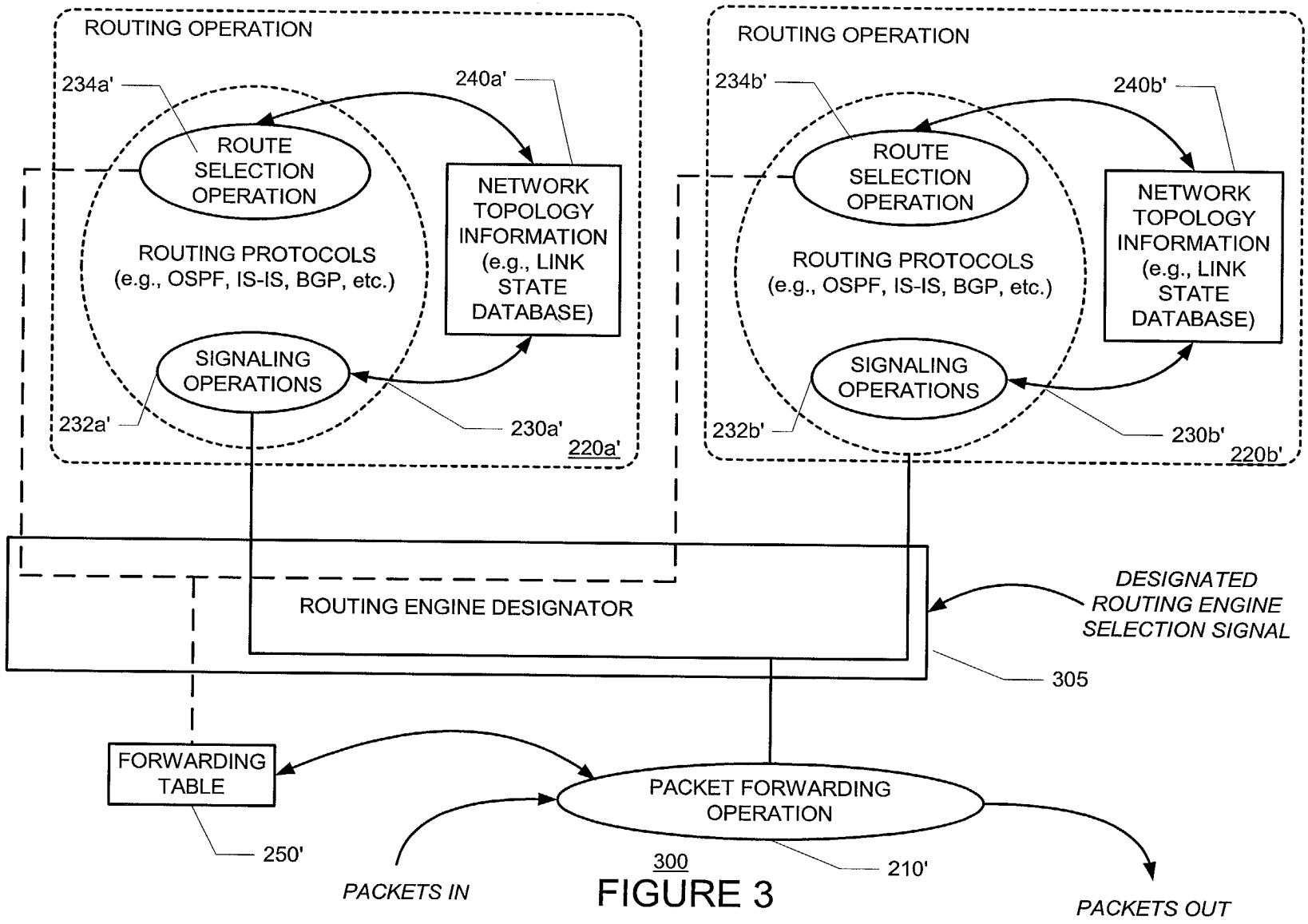


FIGURE 3

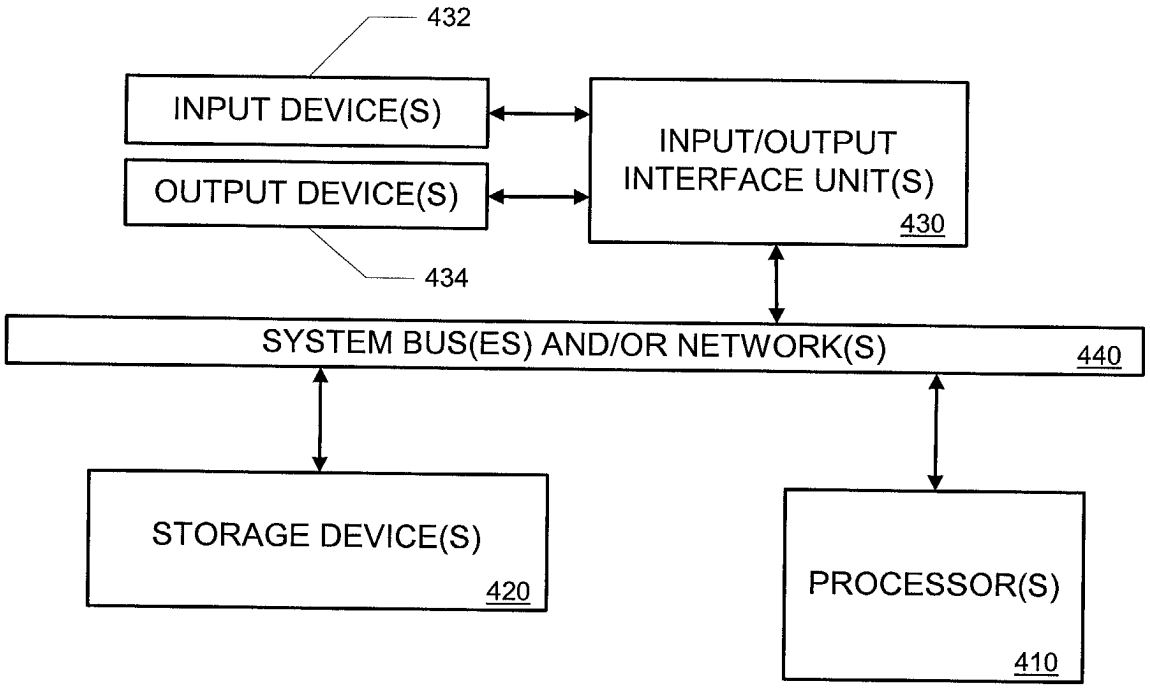


FIGURE 4

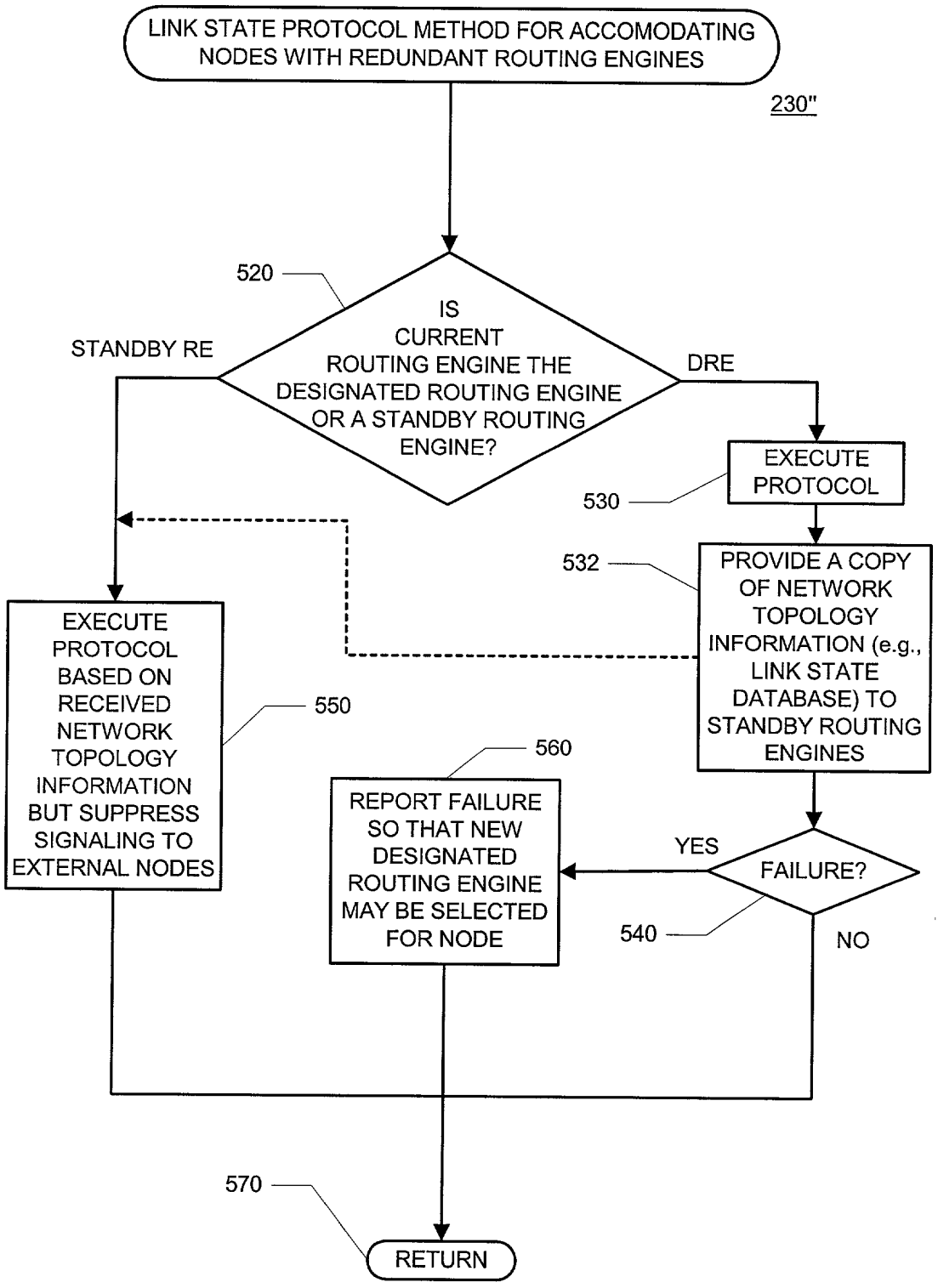

LINK STATE PROTOCOL METHOD FOR ACCOMODATING NODES WITH REDUNDANT ROUTING ENGINES
230"
520
IS CURRENT ROUTING ENGINE THE DESIGNATED ROUTING ENGINE OR A STANDBY ROUTING ENGINE?
STANDBY RE
DRE
EXECUTE PROTOCOL
530
532
PROVIDE A COPY OF NETWORK TOPOLOGY INFORMATION (e.g., LINK STATE DATABASE) TO STANDBY ROUTING ENGINES
EXECUTE PROTOCOL BASED ON RECEIVED NETWORK TOPOLOGY INFORMATION BUT SUPPRESS SIGNALING TO EXTERNAL NODES
550
560
REPORT FAILURE SO THAT NEW DESIGNATED ROUTING ENGINE MAY BE SELECTED FOR NODE
YES
FAILURE?
540
NO
570
RETURN

FIGURE 5

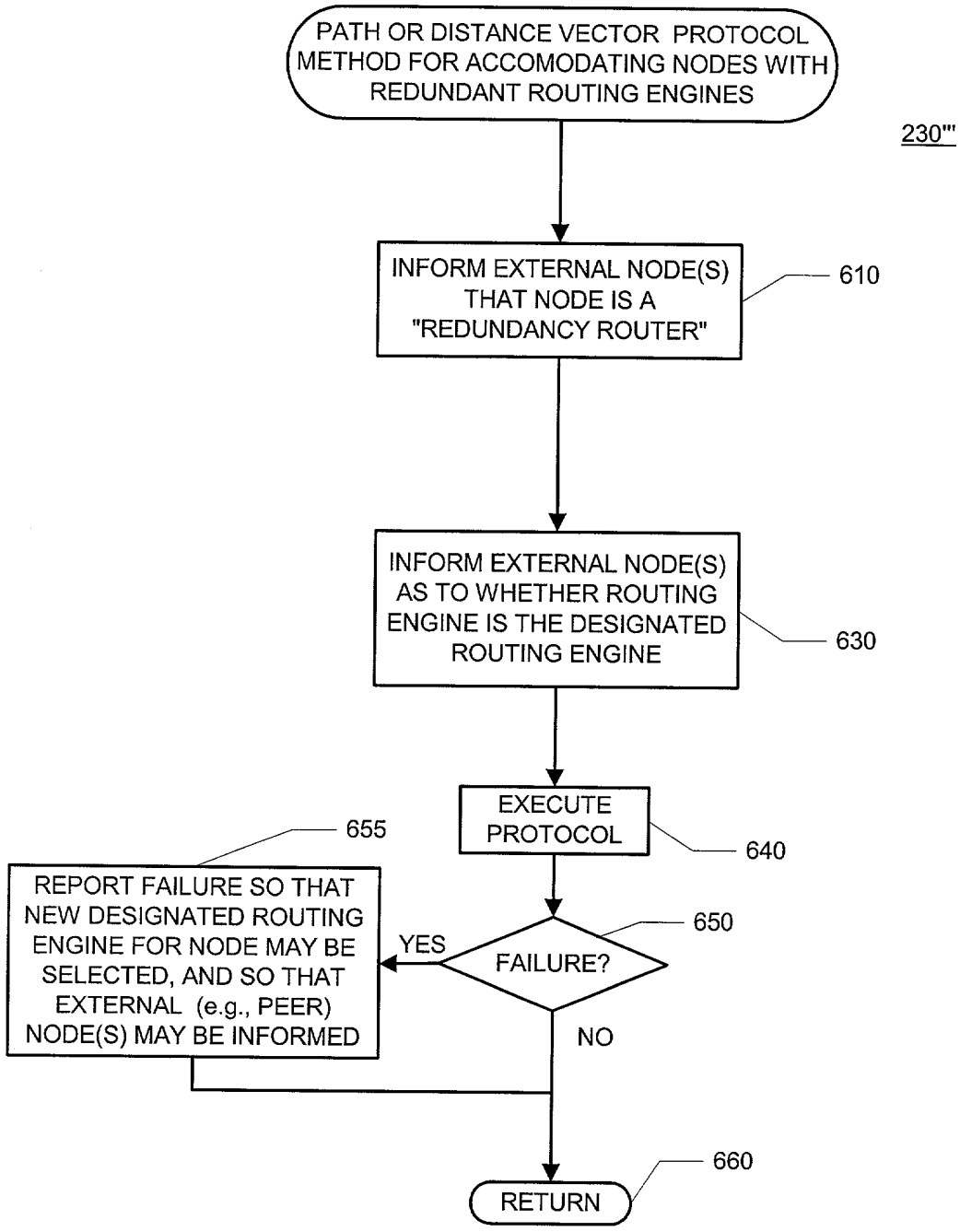

PATH OR DISTANCE VECTOR PROTOCOL METHOD FOR ACCOMODATING NODES WITH REDUNDANT ROUTING ENGINES
230'''
INFORM EXTERNAL NODE(S) THAT NODE IS A "REDUNDANCY ROUTER"
610
INFORM EXTERNAL NODE(S) AS TO WHETHER ROUTING ENGINE IS THE DESIGNATED ROUTING ENGINE
630
EXECUTE PROTOCOL
640
655
REPORT FAILURE SO THAT NEW DESIGNATED ROUTING ENGINE FOR NODE MAY BE SELECTED, AND SO THAT EXTERNAL (e.g., PEER) NODE(S) MAY BE INFORMED
650
YES
FAILURE?
NO
660
RETURN

FIGURE 6

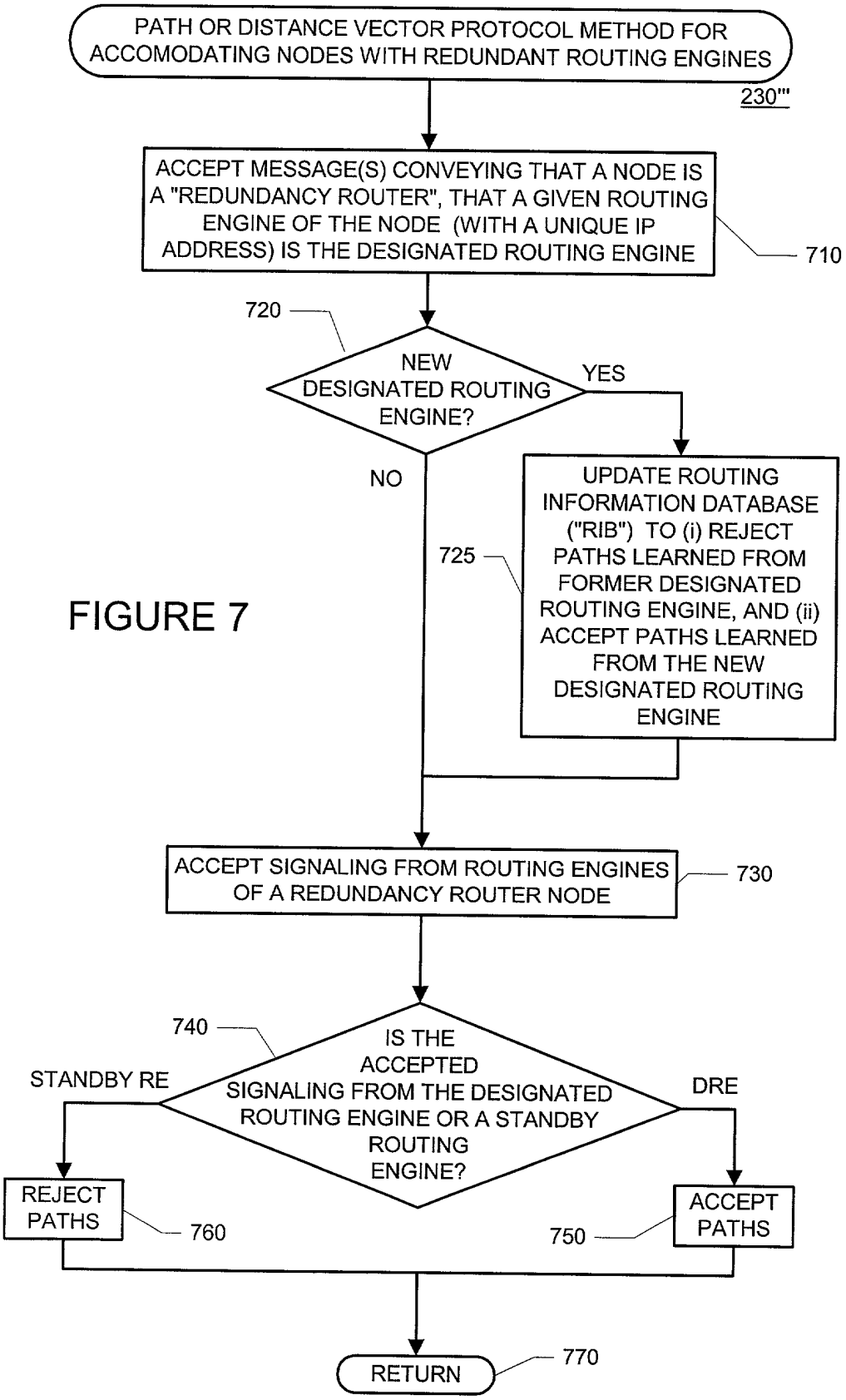

PATH OR DISTANCE VECTOR PROTOCOL METHOD FOR ACCOMODATING NODES WITH REDUNDANT ROUTING ENGINES
230'''
ACCEPT MESSAGE(S) CONVEYING THAT A NODE IS A "REDUNDANCY ROUTER", THAT A GIVEN ROUTING ENGINE OF THE NODE (WITH A UNIQUE IP ADDRESS) IS THE DESIGNATED ROUTING ENGINE
710
720
NEW DESIGNATED ROUTING ENGINE?
YES
NO
UPDATE ROUTING INFORMATION DATABASE ("RIB") TO (i) REJECT PATHS LEARNED FROM FORMER DESIGNATED ROUTING ENGINE, AND (ii) ACCEPT PATHS LEARNED FROM THE NEW DESIGNATED ROUTING ENGINE
725
ACCEPT SIGNALING FROM ROUTING ENGINES OF A REDUNDANCY ROUTER NODE
730
740
IS THE ACCEPTED SIGNALING FROM THE DESIGNATED ROUTING ENGINE OR A STANDBY ROUTING ENGINE?
STANDBY RE
DRE
REJECT PATHS
760
ACCEPT PATHS
750
RETURN
770

FIGURE 7

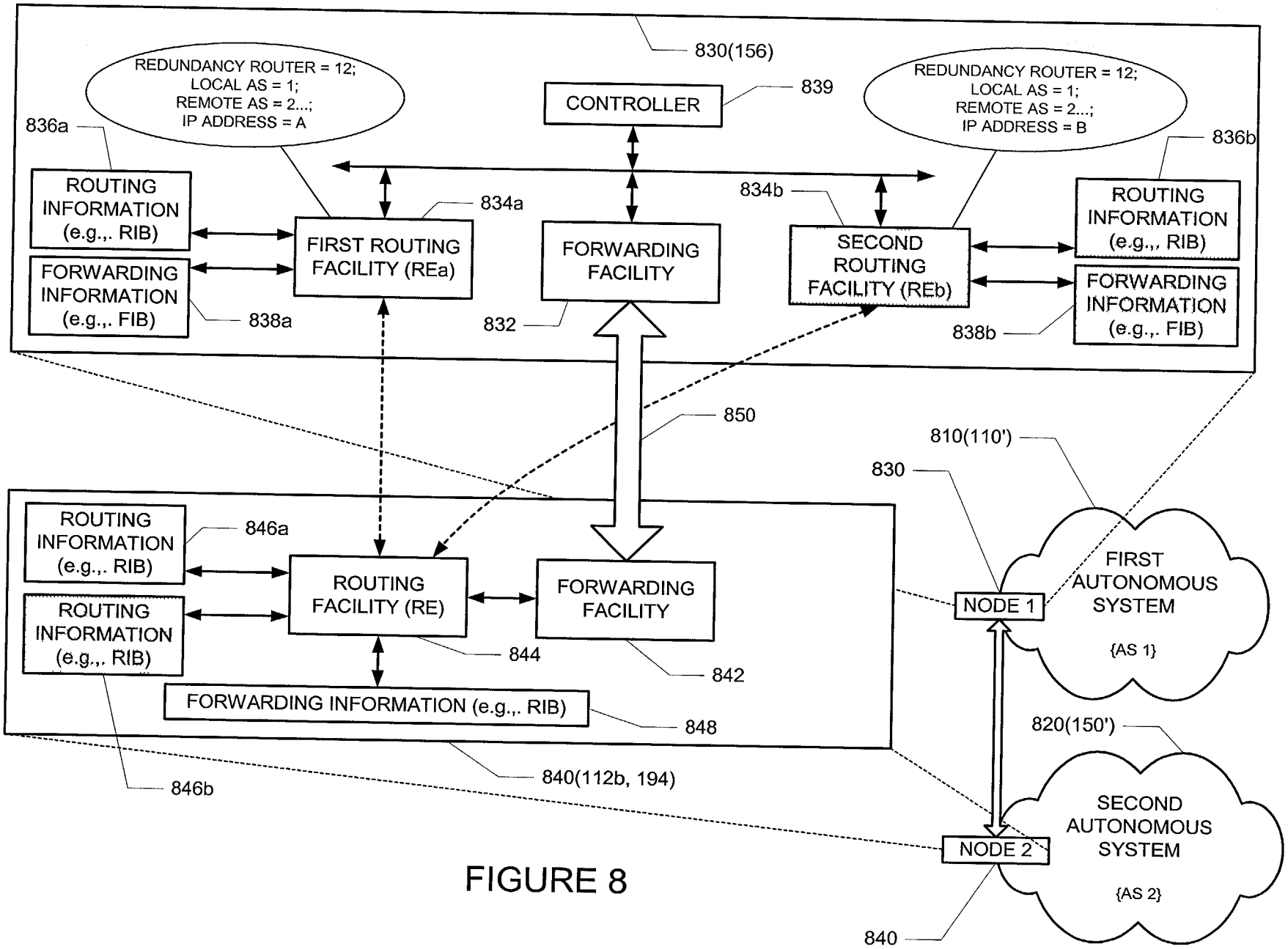


FIGURE 8

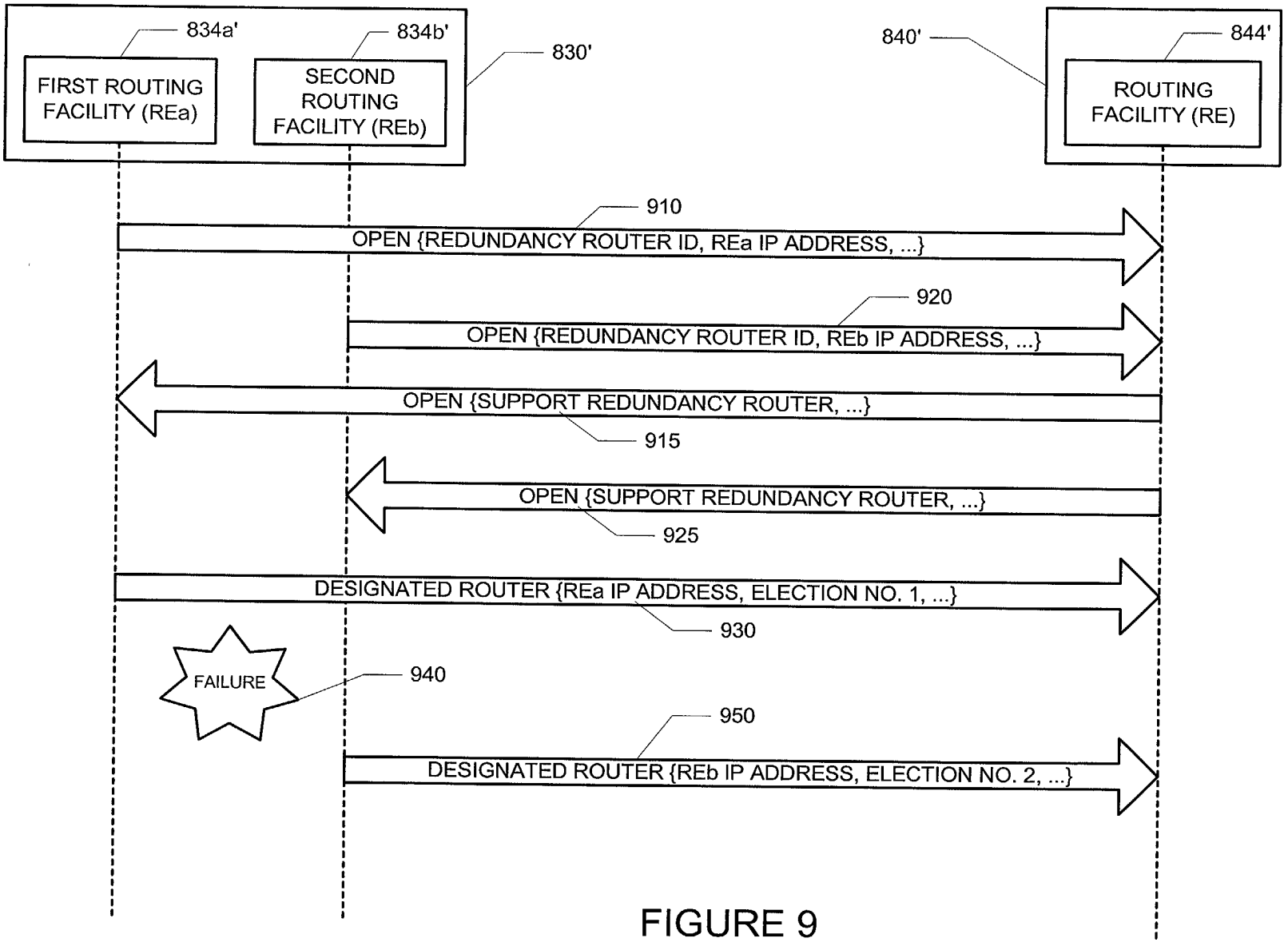

834a'
834b'
830'
FIRST ROUTING FACILITY (REa)
SECOND ROUTING FACILITY (REb)
840'
844'
ROUTING FACILITY (RE)
910
OPEN {REDUNDANCY ROUTER ID, REa IP ADDRESS, ...}
920
OPEN {REDUNDANCY ROUTER ID, REb IP ADDRESS, ...}
OPEN {SUPPORT REDUNDANCY ROUTER, ...}
915
OPEN {SUPPORT REDUNDANCY ROUTER, ...}
925
DESIGNATED ROUTER {REa IP ADDRESS, ELECTION NO. 1, ...}
930
FAILURE
940
950
DESIGNATED ROUTER {REb IP ADDRESS, ELECTION NO. 2, ...}

FIGURE 9

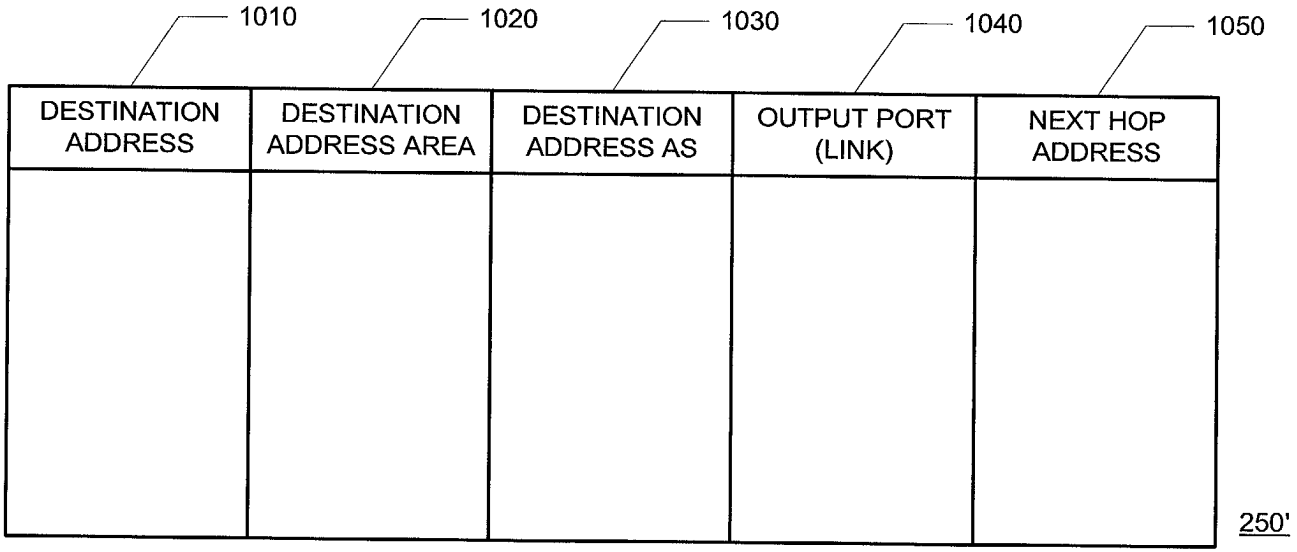

1010
1020
1030
1040
1050
DESTINATION ADDRESS
DESTINATION ADDRESS AREA
DESTINATION ADDRESS AS
OUTPUT PORT (LINK)
NEXT HOP ADDRESS
250'

FIGURE 10